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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,283	03/18/2004	Shankar Pal	MSFT-2930/304868.01	5646

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PHILADELPHIA, PA 19104-2891

EXAMINER
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RAYYAN, SUSAN F

ART UNIT	PAPER NUMBER
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2167

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/21/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/803,283

Applicant(s)

PAL ET AL.

Examiner

Susan F. Rayyan

Art Unit

2167

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 December 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 1-23 are pending.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1-23 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent Publication Number 2003/0101169 issued to Vadiraja Bhatt et al ("Bhatt").**

**As per claim 1 Bhatt anticipates:**

A method for compiling a query including an extensible markup language based expression (Figure 8, element 802), the method comprising:

transforming an abstract syntax tree corresponding to the expression into a unified tree including extensible markup language based algebra operations (paragraph 80-82, 154, receives and parses a query received from an application and generates a logical tree which includes algebraic operations);

and mapping the extensible markup language based algebra operations in the unified tree to relational algebra based operations in a relational tree (paragraph 120, 155, Figure 8, element 803, the logical tree will be translated by the query translation module which includes algebraic operations);

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wherein the extendable markup language based algebra operations and the relational algebra based operations comprise instructions for modifying the data that is stored in the node of the instance of the extendable markup language schema ( paragraph 74-75, XML data transform module converts or transforms (modifies) the XML document into a transformed document referred to as SybXMLstream. The SybXMLstream object contains data from the transformed (modified) document together with auxiliary structures).

**As per claim 2**, same as claim arguments above and Bhatt anticipates:

wherein transforming the abstract syntax tree comprises:

recursively traversing the abstract syntax tree (paragraph 84-89, 121);

generating a unified sub-tree for each abstract syntax tree node, the sub-tree including at least one corresponding extensible markup language based algebra operation and inserting the sub-tree into the unified tree (paragraph 90-91, transformation process includes algebraic operations) .

**As per claim 3**, same as claim arguments above and Bhatt anticipates:

recursively traversing the unified tree (paragraph 99, 121);

generating a relational sub-tree for each unified tree node, the sub-tree including at least one corresponding relational algebra based operation (paragraph 101, the query translation module receives as input the tree generated by the XQL parser and generates a physical operator tree which includes algebraic based operations) and inserting the sub-tree into the relational tree (paragraph 101).

**As per claim 4**, same as claim arguments above and Bhatt anticipates:

further comprising parsing the query to yield the extensible markup language based expression (paragraph 74).

**As per claim 5**, same as claim arguments above and Bhatt anticipates:

further comprising parsing the extensible markup language based expression to yield the abstract syntax tree (paragraph 74).

**As per claim 6**, same as claim arguments above and Bhatt anticipates:

further comprising generating a query plan according to the relational tree (paragraph 121, Figure 6).

**As per claim 7**, same as claim arguments above and Bhatt anticipates:

further comprising submitting the query plan to a query processor for execution by the query processor (paragraph 121, Figure 6).

**As per claim 8**, same as claim arguments above and Bhatt anticipates:

comprising mapping the extensible markup language based algebra operations in the unified tree to relational algebra based operations with nested table abstraction in the relational tree (paragraph 155).

**Claims 9-23** limitations are rejected based on the same rationale as claims 1-8 and the limitation "enables a parent to descendent relationship to be established among instances of nodes in an extendable markup language schemas without compiling separate lists corresponding to each of the nodes" of independent claims 16, 20 are anticipated by Bhatt at paragraph 75, lines 11-18, as link index stores linkage information about the parent-child relationship of nodes. This linkage information enables source document to recompose. The path index stores hierarchical information about particular items of data in the order that these items occur in the source document.

### ***Response to Arguments***

3. Applicant's arguments filed December 20, 2006 have been fully considered but they are not persuasive.

Applicant argues prior art of record fails to teach XQL engine can translate queries with instructions to modify XML data in the XML store. Examiner finds Bhatt teaches this limitation at paragraphs 74-75, as XML data transform module converts or transforms (modifies) the XML document into a transformed document referred to as SybXMLstream. The SybXMLstream object contains data from the transformed (modified) document together with auxiliary structures.

Applicant argues Bhatt does not teach "a nested table abstraction operation that enables a parent to descendent relationship to be established among instances of nodes in an extendable markup language schema without compiling separate lists corresponding to each of the nodes". Examiner find Bhatt does teach this limitation at

paragraph 75, lines 11-18, as link index stores linkage information about the parent-child relationship of nodes. This linkage information enables source document to recompose. The path index stores hierarchical information about particular items of data in the order that these items occur in the source

### ***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan Rayyan whose telephone number is (571) 272-1675. The examiner can normally be reached M-F: 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Susan Rayyan

March 17, 2007

  
CHONG H. KIM  
PRIMARY EXAMINER